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THE UNIVERSITY OF ALBERTA

The Effects of a Structured T-Group on
Behavioural Characteristics and
Attitudes Toward Teaching



by
Harvey Brink

A Thesis

Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements for the Degree
of Master of Education in Counselling Psychology

Department of Educational Psychology

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THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Effects of a Structured T-Group on Behavioural Characteristics and Attitudes Toward Teaching" submitted by Harvey A. Brink in partial fulfillment of the requirements for the degree of Master of Education in Counselling Psychology.

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ABSTRACT

The study examined the effects of a structured T-group on the behavioural characteristics and the dimensions of teacher beliefs about the teaching process of 107 student teachers enrolled in an introductory guidance course. A second aspect of the study was to investigate whether any relationship existed between the behavioural characteristics of student teachers and their dimensions of teacher beliefs.

Behavioural characteristics were measured by the Personality Research Form (Jackson, 1967) while the Dimensions of Teacher Beliefs (Wehling and Charters, 1969) was used to measure student teacher beliefs about the teaching process. The structured T-group was based on the materials comprising the Research Utilizing Problem Solving (Jung, Butman and Rothlind, 1972), a series of simulation exercises designed to help build teamwork skills and to facilitate interpersonal problem solving in the schools.

The structured T-group was found to produce significant changes on the Harmavoidance, Sentience and Endurance scales of the Personality Research Form. These changes occurred only in single groups and were not consistent among groups, and thus prohibit generalizability as to the effects of the structured T-group. No changes in the dimensions of teacher beliefs were observed within or among the experimental groups.

Several low but significant correlations were found to exist between the behavioural characteristics and teacher beliefs of the subjects included in this study and are as follows ($p < .05$):

(a) A high score on the belief of Subject Matter Emphasis was found to correlate positively with the behavioural characteristics of Cognitive Structure, Defence, Harmavoidance, Order and Succorance and negatively with the characteristic of Impulsivity. (b) A belief toward Student Autonomy as opposed to Teacher Control was positively correlated with the behavioural characteristics of Autonomy, Change, Exhibition and Impulsivity while correlating negatively with Cognitive Structure, Defence, Order and Succorance. (c) A high belief on Emotional Disengagement was positively correlated with the behavioural characteristics of Cognitive Structure, Defence and Order while negatively correlating with Affiliation and Change. (d) A high belief in Consideration of Student Viewpoint was positively correlated with the behavioural characteristics of Harmavoidance and Nurturance. (e) A belief in high Classroom Order was positively correlated with the behavioural characteristics of Cognitive Structure, Order and Succorance and negatively correlated with Autonomy and Understanding. (f) A high belief toward Student Challenge was positively correlated with the behavioural characteristics of Abasement and Nurturance. (g) A high belief toward Integrative Learning was positively correlated with the behavioural characteristics of Cognitive Structure, Nurturance and Order.

Although the study found no consistent changes in either behavioural characteristics or beliefs about the teaching process, participants' self-report inventories showed that they believed the workshop was a valuable experience and had given them new insights regarding their own behaviour as well as the teaching process.

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CHAPTER I

INTRODUCTION

According to Blank, Gottsegen and Gottsegen (1971):

"Education has mostly focused on the accumulation of knowledge and skills with reference to their application to all forms of problem solving. Yet the inner man has not been educated. The teacher can reach the inner depths of his pupils if he can be in depth relatedness to himself to begin with." (p.345)

McClain (1970) echoes this view saying that during the past ten to fifteen years teacher educators have become aware that cognitive development is not enough and responsibility for developing psychologically healthy teachers must also occur. On the same topic Jacobs (1968) wrote:

". . . it should be the purpose of a teacher education program to mold attitudes that will equip the prospective teacher to deal with the teaching role in a way that will bring the greatest benefit to his students in terms of their individual growth toward living in a free and democratic society." (p.410)

The concern with the teacher as a person has been paralleled and influenced by an emphasis on positive mental health or self actualization by psychologists such as Maslow, Rogers, Jourard and others, which has resulted in increased teacher exposure to mental health courses, workshops and sensitivity training (McClain, 1970).

One of the major vehicles employed for instruction in emotional growth has been the use of group processes such as T-groups, encounter groups and sensitivity groups. Group processes such as these originated at the National Training Laboratories (NTL) in Bethel, Maine with the T-group. The purpose of these T-groups was to provide

training in self-understanding and interpersonal communication. Recent literature has tended to use the terms T-group, encounter group and sensitivity group synonymously (Rogers 1970). This study will also use these terms synonymously.

While the trend has been to use interchangeable terms for group reference, the actual processes involved within the groups appear to have become increasingly diversified. Lomranz, Lakin and Schiffman (1973) report that :

"It has become clear that sensitivity training can no longer be considered a single form. Sensitivity training has become a movement and in so doing has lost the coherence, becoming a diversified and fragmented series of processes some of which are mutually antagonistic. The spectrum of goals now ranges from organizational effectiveness to body awareness; from a spirit of inquiry 'to play or to swing'." (p.339)

Lomranz, Lakin and Schiffman (1973) go on to postulate three types of sensitivity and encounter groups. The first type they call Interpersonal and Group Oriented. In this type of group the central focus is on the group process and personal experiences are relevant as they bear on group dynamics. The emphasis is on the outer directed and manifest aspects of the person. The Corrective-Clinical is the second type of group postulated. Here the goals are seen as being similar to those of dynamic psychotherapy with the focus being on working through emotional conflicts, reducing defensiveness and maintaining a corrective healing or therapeutic presence. The third group category has been labelled the Personal-Expressive. This is the type of group espoused by Rogers and at the Esalon Institute where the aim is for personal growth through expanding experience. The authors imply that, in the Personal-

Expressive groups, understanding seems to be subordinated to affective interchange and that the group has only limited significance as an area in which personal encounters occur. Although the author is of the opinion that these categories may overlap for a given group, the primary focus of this study will be on the Interpersonal and Group Oriented category. In addition the study will be somewhat limited to such groups as they apply to student teachers, teachers or as they have direct relevance to the field of education.

Rogers (1970) indicates that group processes have been the most potent and rapidly spreading method of providing emotional growth of all the social inventions of the past century.

This rise in the popularity of groups has been accompanied by much controversy. Rivera (1972) maintains that sensitivity training teaches task-oriented conformity with little consideration given to the importance of educating people to stand up for their principles and beliefs. Intellect and independence are not encouraged in sensitivity training. On the other hand Lawrence (1970) states that:

"A critical misunderstanding is that sensitivity training, and the T-group in particular, emphasizes consensus at the expense of rationality in decision making by subjugating the individual's opinion for the sake of 'good relationships'. Rather is sensitivity training an opportunity to understand the place of feelings in rationality." (p.74)

As if to clear up ambiguities as to the effectiveness of T-groups, Boller and Boller (1973) involved twenty-four 'skeptical' teachers in a one day T-group. They report that the teachers seemed to enjoy the experience and changed significantly in some of their interpersonal attitudes as measured by the Barrett-Lennard Relationship Inventory.

The focus on emotional growth or sensitivity training groups appears to have stimulated and been responded to by a variety of our cultural institutions other than that of education. Rogers (1970) cites applications of sensitivity training in areas involving industry, religious institutions, race relations, government and the family. Industry has used T-groups for dealing with psychological problems which developed with company mergers and for organizational development. Improved communication between generations and between church officials and parishioners have been some goals of sensitivity training within the church. In the area of race relations, such training has been used to handle interpersonal and intergroup tensions. The government has considered the use of T-groups to facilitate organizational development and to relieve international tensions. The objective of sensitivity training within the family has focused on improving and preventing marital tensions.

Regarding the uses of T-groups in education Bowen and Siegal (1973) state that:

"Group projects, where individuals must cooperate to achieve a common goal, are widely used to provide a valuable learning experience for introducing students to the issues of group processes, particularly in graduate professional programs."
(P.433)

In addition to teachers' awareness of group processes, T-groups in educational settings have focused on teacher's attitudes, i.e. Lippit (1971); behaviours - i.e. Krafft (1968); perceptions - i.e. Weldon (1971); and personalities - i.e. Zimit and Fine (1955).

The research of the effects of T-groups in educational, as well as other situations, has been characterized by ambiguity.

Few clear cut results have been forthcoming. For example, in the area of a T-group's effects on attitudes, Carron (1964), Smith (1964), Schutz and Allen (1966), Lippit (1971) and Fauth (1973) found that T-groups had significant effects on the attitudes of participants. On the other hand Kernon (1964), Asquith and Hedlund (1967), Baumgrartel and Goldstein (1967), Moore (1971) and Leon (1972) found that T-groups had no significant effects on the attitudes of participants.

Statement of the Problem

One form of a structured T-group program in use at the University of Alberta is the Research Utilizing Problem Solving (RUPS) workshop. The RUPS program is a highly structured twenty seven and a half hour workshop. The design also calls for an additional six hours of meetings making a total of thirty-three and a half training hours. The purposes of the workshop, according to Jung, Butman and Rothlind (1972), are to try out the steps of the RUPS process as a way of working toward improvements in the school setting and to try out some ways of increasing teamwork skills that can facilitate problem solving in the local school setting. The RUPS program consists of a tape recording of simulated classroom problems, sixteen sequential and cumulative training units, and a data gathering book entitled "Diagnosing Classroom Learning Environments." The basic work group is a sextet in which participants train each other using the criteria provided in the materials.

According to Jung, Butman and Rothlind (1972), the objectives of the RUPS workshop are to provide participants with skills and knowledge for the following areas:

1. Applying four guideline criteria for writing a problem statement.
2. Paraphrasing in interpersonal communications.
3. Using the force-field diagnostic technique.
4. Selecting and creating instruments for data gathering.
5. Diagnosing teamwork relationships.
6. Spotting and analyzing major results of data collected.
7. Identifying one's personal style of operationalizing dimensions.
8. Using the concepts and skills of giving and receiving feedback.
9. Using criteria for deriving implications from research findings.
10. Brainstorming action alternatives to meet implications derived from findings.
11. Applying guidelines for planning and implementing action alternatives.
12. Identifying and evaluating small group dynamics.
13. Planning a back home project.
14. Evaluating solutions plans.
15. Conducting a back home RUPS project.

The above purposes and objectives of the RUPS program are those formally outlined by the authors. Additional outcomes of the RUPS workshop have been observed by instructors and participants of previous RUPS administrations at the University of Alberta. The main source of the above is the self-report inventories completed by participants. These additional outcomes include: (a) The development throughout the workshop of a strong rapport among participants, (b) A great tendency toward the sharing of feelings, (c) Critical assessment of the feelings, attitudes, and behaviours of self and others, (d) Use of the RUPS framework to achieve personal changes

in behaviours, attitudes and beliefs, (e) Close group cohesiveness and (c) Self-reports, actual changes in behavioural characteristics and attitudes toward teaching as a result of participation in the RUPS workshop.

The RUPS program has been widely used among a teacher trainee population enrolled in a course entitled Introduction to Guidance at the University of Alberta. This structured T-group workshop has been used at the above institution for three years. It is estimated that approximately eight hundred students per year participate in the workshop. Since it was implemented as optional curriculum material at the University of Alberta, no research has been conducted regarding changes in attitudes or behavioural characteristics if any, of student teachers as a result of participation in the RUPS workshop. It is the purpose of this study to investigate the effects, if any, that the RUPS program within the context of an introductory guidance course had on student behavioural characteristics and attitudes.

Purpose of the Study

The purpose of the study is threefold.

1. What, if any, changes in the behavioural characteristics of student teachers occur as a result of participation in the RUPS workshop?
2. What, if any, changes in the dimensions of teacher beliefs of the participants occur as a result of participation in the RUPS workshop?

3. Is there any relationship between the behavioural characteristics of student teachers and their dimensions of teacher beliefs?

Definition of Terms

The following definitions were used in this study.

Behavioural Characteristics

That which is measured by the Personality Research Form (Jackson, 1967).

Attitudes or Attitudes Toward Teaching

That which is measured by the Dimensions of Teacher Beliefs About the Teaching Process (Wehling and Charters, 1969)

RUPS, RUPS Program, RUPS Workshop or Structured T-Group Experience

That workshop material as outlined briefly above and fully described in Jung, C., Butman, J.S. and Rothlind, D.

Research Utilizing Problem Solving: Technical Report No.7, Portland Northwest Regional Educational Laboratory, 1972.

Students, Student Teachers, Teacher Trainees, Subjects, or Participants

Undergraduates in the Faculty of Education who were enrolled in Introduction to Guidance 411 at the University of Alberta.

Teaching Assistant

A leader of a RUPS workshop and an instructor in Introduction to Guidance 411 who is a full time student at the University of Alberta.
Half Course

A course such as Introduction to Guidance 411 which is comprised of approximately thirty nine teaching hours over a period

of approximately three and a half months and which is offered at least twice a year at the University of Alberta.

Limitations of the Study

Perceiving a need for overcoming major methodological and design inadequacies, Diamond and Shapiro (1973) proposed a model for the long term scientific study of encounter, T- and sensitivity groups. They see the major methodological flaws in group outcome research to be (a) lack of adequate base rate or pretraining measures, (b) failure to include a matched control group, (c) lack of truly independent observers, (d) failure to control adequately for test reactivity and obtrusive observer effects, (e) failure to employ dependent measures consistent with the groups goals and (f) failure to include follow-up. Diamond and Shapiro (1973) suggest that the following procedures will overcome the above deficiencies: (a) determination and specification of group goals, (b) screening of group members, (c) pretesting, (d) experimental treatment, (e) post-testing, (f) follow-up testing, (g) long term follow-up testing, (h) analysis of data.

The present study did not provide for screening of group members, follow-up testing and long term follow-up testing. Since no known standardized tests for the desired dependent measures exists this study may be deficient in that respect.

Since the population used for this study was undergraduates at a specific university who were enrolled in a specific course, the generalizability of these results is questionable.

The reliability of the results between classes of students may have been somewhat weakened due to the sections having unequal

enrollments and the professors or teaching assistants conducting their classes and the RUPS workshop in different ways.

Overview of the Study

Chapter I introduces the topic of this investigation as well as outlining its purpose, importance, and limitations. Also some of the problems and controversy that surround T-groups are indicated. Chapter II provides a review of the related literature surrounding the topics of (a) the rationale and use of T-groups in teacher education, (b) attitudinal, behavioural, perceptual and personality changes as a result of T-group participation and (c) previous research done on the RUPS program.

Chapter III describes how this research project was carried out while Chapter IV provides the analysis of the data obtained. Chapter V consists of the discussion surrounding the data as well as conclusions and implications for further research.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Literature Related to the Rationale and Use of T-groups in Teacher Education.

Andrew (1972) indicates four goals which he considers to be needed in educational programs to create more humanistic teachers. These are: (a) development of knowledge and skill in characteristically human ways of knowledge acquisition and means of self-expression, (b) development of positive identity as a teacher, (c) development of skill in interpersonal communication and effective group process and (c) development of a personal knowledge of children.

Lawrence (1970) has outlined five assumptions and values implicit in sensitivity training which include: (a) the insights of behavioural science can best be learned experientially at the pace of the participant, (b) the more authentic these relationships, the more likely will open, honest and direct communication be possible, (c) given interpersonal feedback, self-awareness self-esteem will be fostered which will extend the participants ability to learn, (d) commitment to the spirit of inquiry and the diagnostic approach to interpersonal situations and (e) commitment to open and honest communication wherever appropriate. Andrew (1972) and Lawrence (1970) emphasize that sensitivity training and T-group work are only an introductory step in the transmission of humanistic values.

Miles (1959) sees the aims of sensitivity training as being directed towards increasing the participant's: (a) sensitivity or the ability to perceive what is actually going on in the social situation both behaviourally and affectively (b) diagnostic ability

or the skill of assessing ongoing social situations in a way that enables effective action (c) action skill or the ability to intervene effectively in ongoing situations in such a way as to maximize personal and group effectiveness and satisfaction.

Lippit (1971) conducted a study involving 68 male and female teacher trainees at the University of Michigan. The 34 subjects in the experimental group participated in a classroom experience based on Human Relations Laboratory Training principles and methods while the remaining 34 subjects in the control group continued in a traditional classroom experience. On the basis of this study Lippit (1971) concluded that the experimental treatment was more related to increased teaching effectiveness and less related to reduced teaching effectiveness than the control treatment. A second conclusion reached was that classes based on Human Relations Training methods and principles represent a valuable element or a sound base for teacher training programs.

Branan (1971) conducted a survey among 150 college-age students, asking them to describe what they considered to be the two most negative experiences in their life. That is, experiences which make their life worse or were a negative force in their development. The results indicated that by far the largest category of interpersonal negative experiences involved interaction with teachers. On this basis the study concluded that Human Relations knowledge and skill should become a pre-requisite to teacher credentials at any level.

Hill's Learning Through Discussion Method and group interaction exercises adapted from those developed by NTL were used by Gill (1971) to investigate the effects of training in group interaction skills among 14 secondary teachers who were matched on grade and subject

matter taught, teaching experience and sex. Twelve weekly training sessions were held after school and the effects of the training program were assessed by repeated measures of the interaction patterns in each teacher's high school classroom. The implications arising out of this study were the strong support for the inclusion of training in group interaction skills in teacher education and the demonstrated value of repeated measures of classroom behaviour in assessing the effectiveness of teacher education programs.

Studies by Moore (1971) and Sebring (1971), which are discussed below, both indicated that while no significant changes in attitudinal or behavioural variables were found as a result of group counselling or human relations training, the participants involved viewed the experience as a valuable addition to the curriculum.

Research Related to Attitudinal Changes as a Result of T-group Participation

Because of the vast amount of research available on the effects of T-groups on personality factors, it is deemed necessary to delineate rather specific areas in an attempt to make the studies more meaningful. Although not directly related to T-group research the following study is included in an attempt to make clear the distinction and relationship between attitudes and factors which will be discussed in later sections.

Kernan and Trebbi (1973) in a statistical analysis of Likert-type statements examined the relationship between incoming information and a person's attitude. They found that cognition, affect and behaviour were unique and stable components of attitude. Furthermore, it was found the three components of attitude interact in a consistent

way. Incoming information was found to operate on the cognitive component of attitude which, if sufficiently reorganized, occasions change in the affective component, and this, if sufficiently large, finally actuates the behavioural component. This study is seen as having a potential application to the area of T-group research as well as helping to clarify some of the issues involved in the present investigation and in the reported research which follows.

Many of the early studies in the evaluation of T-group effectiveness appear to have been conducted in organizational settings and implicitly or explicitly centered around attitudes toward authority or supervision. Elliot (1958) made an early attempt to study human relations among employees of an engineering company. He used the Supervisory Attitude Scale together with his own instrument called How Groups Work. A significant change was detected toward greater emphasis on human relations among the experimental group than in the control group. Kernon (1964) also assessed engineering personnel, however the Thematic Apperception Test (TAT) and Adorno's F Scale were employed. Forty experimental subjects participated in a three day T-group. Pre and post measures from this group were compared with those of 20 control subjects. No significant changes were noted on the scales used in either instrument.

Adorno's F Scale and the Leadership Opinion Questionnaire (LOQ) were used by Carron (1964) to measure changes resultant from a T-group among research and development managers. Attitude measurements were taken immediately before and after the group and at periods 6 and 17 months later. Temporary changes were found in the direction of decreased values on authoritarianism, increased values

on consideration and decreased values on initiating structure.

Carron (1964) interpreted these changes as indicating that participants believed more in the need for the leadership behaviour of consideration than in the leadership behaviour of structure. In another study using the LOQ, this time in conjunction with the Supervisory Index, Asquith and Hedlund (1967) measured for change in management trainees resulting from participation in a one week T-group. In this instance no attitudinal changes on either instrument were found.

A number of studies have used the FIRO-B in an attempt to measure attitude change. Smith (1964) compared 108 T-group participants with 44 control group subjects on attitudes of control and affection. It was hypothesized that the direction of change for the experimental groups would be a movement toward the median since extreme scores were thought to be consistent with a more rigid or inflexible attitudinal style. This hypothesis was supported, however, Smith (1964) indicated that an initial score bias may have influenced the results. Cureton (1968) replicated Smith's study, controlling for initial scores. Smith's original hypothesis was still supported. Schutz and Allan (1966) in a study involving 71 subjects in the Western Training Laboratory in Human Relations obtained the same trend toward the median of the FIRO-B scales among experimental group subjects as was obtained in the Smith (1964) and Cureton (1968) studies. Using the FIRO-B together with the Allport-Vernon Study of Values (SV) Baumgartel and Goldstein (1967) tested the hypothesis that subjects would tend to closely approximate highly valued group members in their attitudes. Group members ranked each other to determine who were the most valued members of the group. Both of the above instruments were administered

prior to the T-group and their scale scores were correlated with sociometric rankings of the most valued members obtained at the end of the group. Two significant correlations emerged, however, only one was sustained when the two instruments were administered after the T-group. It was found that highly valued members scored low on the religion scale of the S.V. The trend toward the median of the FIRO-B scales was not found in this case as participants increased in their "wanted" control scores and decreased in their "wanted" affection scores. Bowers and Soar (1961) conducted the earliest reviewed study in the educational realm concerning teacher attitude change as a result of T-group participation. In this study the experimental and control groups were matched on a number of variables. Analysis of the results indicated that both groups changed significantly towards attitudes of democratic leadership and positive attitude toward students and that the difference between the groups was not significant. Teachers whose personality inventories revealed good adjustment and who participated in a T-group were found more likely to value student participation than were control group members.

Using the Minnesota Teacher Attitude Inventory (MTAI) as a pre and post test measure, Weldon (1971) studied the effects of a T-group experience on the attitudes of teachers toward students. Twenty-two student teachers were divided into an experimental and a control group. The former attended a ten week multi-method value seminar group while the latter attended regular classes with opportunities for supervisor guidance. Significant positive changes in attitudes toward students were found only in the experimental group. Campbell (1973) used the MTAI to examine the relationship between the

attitudes of student teachers and their ratings by school administrators on desirable teacher characteristics. Little relationship was found between student teacher's attitudes after field experience and characteristics deemed desirable by administrators.

Another study involving the MTAI was conducted by Moore (1971) to investigate the effects of group counselling on the attitudes of student teachers toward interpersonal relationships with children. Thirty-six subjects were divided into two counselling groups, two lecture groups and two control groups. Groups were randomly assigned to one of two male counsellors for 720 minutes of group time. While substantial differences existed between the counselling and lecture groups in terms of control, content and affect, no significant changes between the groups were revealed on the MTAI.

Leon (1972) used the California Psychological Inventory (CPI) and the Dogmatism scale in an experimental pre-post test model to measure attitude change in a preteaching population. The experimental population consisted of 92 education students, divided into 8 T-groups which met weekly in unstructured sessions while the 25 control group members attended regular classes. Results showed no attitude change attributable to the treatment.

Significant reductions in attitudes of racial prejudice among teachers and volunteer school personnel as a result of a T-group experience were found by Fauth (1973). Pre - post and follow-up testing was done using the Woodmansee and Cook Multifactor Racial Attitudes Inventory, Bergen's Acceptance of Self and Others Scale and Morel's Teacher Behaviour Inventory. While participant's attitudes changed significantly, no evidence was found that any positive change in behaviour occurred in classroom behaviours. Teacher's attitudes

of self-acceptance and acceptance of others increased as did their self-perception of becoming less authoritarian and more accepting of student's ideas. Fauth concludes that the T-group was effective in changing attitudes but not behaviours.

Research Related to Behavioural Changes as a Result of T-Group Participation

In what was primarily an evaluational study of a set of categories to measure interpersonal competence resulting from T-groups as opposed to lecture methods, Argyris (1965) succeeded in demonstrating that T-group participants changed behaviourally. The behavioural changes were in the direction of being more open and trusting in discussing case studies than lecture trained members.

Using an integrated, multi-media, Human Relations program Calliotte (1971) reports results which indicate that increased levels of self-sensitivity to feelings and abilities to establish warm and meaningful relationships resulted. The program used consisted of role playing, interpersonal exercises, video taping, critical incident films and discussion. Khanna (1969) reports that similar behavioural changes to those described above resulted from a more traditional T-group experience.

In contrast to the above studies Johnson (1966) found that T-group training did not significantly affect the level of personal functioning of participants. In this study Bales Interaction Analysis was used to categorize interventions made by the trainer. The study was conducted with three groups of eleven or twelve members and three control groups with a total of forty-six members.

Negative findings were also obtained by Sebring (1971) in a study designed to measure perceptions, attitudes and behaviours.

The study questioned whether T-group trained teachers improved their self-concept, decreased their authoritarianism, exhibited a more accepting attitude toward students, created a more supportive classroom climate and viewed human relations training as a valuable part of the curriculum. The relationship between the teacher's perceived value of human relations training in the curriculum and the social-emotional climate of that teacher's classroom was also questioned. No significant difference between experimental and control groups was found on any of the variables.

A study by Gill (1971), the design of which has been mentioned above, was also concerned with factors affecting classroom climate and interaction patterns. The experimental group was found to (a) make significantly more positive reactions to student's behaviour, (b) ask more high level questions, (c) have more pupil talk and less teacher talk in the classroom and (d) have more student initiated responses in the classroom.

Krafft (1968) designed a study to determine whether, and how, training laboratory methods could help teachers become more effective small group leaders and be more effective in their interaction with colleagues. The study had an experimental pre-post test design with provision for a six month follow-up. Bunker's Categorization System and the Perceived Small Group Seminar Atmosphere (PSGSA) sentence stem instrument were used to determine behavioural change. T-group trained participants were found to have changed in a positive direction on fourteen behaviours relating to communication and interpersonal relationships. Furthermore the participant's colleagues and principles were still found to perceive these changes in a six month follow-up study.

The aims of a study by Bunker (1965) were very similar to those outlined by Krafft (1968) above, however the participants were industrial workers rather than teachers. Following a T-group, participants showed significant increases in behaviours related to cognitive openness, behavioural skills and the understanding of social processes. A significant relationship was found between behaviour change as rated by fellow group members during training and long term verified changes on the job.

Bruce, Dirr and Hunt (1969) designed a group training program to increase the sensitivity of the teacher to the learner's frame of reference. The phased program concentrated on discrimination training together with practice and feedback. Implementation occurred with a population of 24 in a small liberal arts college for girls. Assessment of interpersonal sensitivity and flexibility of teacher-learner interaction was carried out with an instrument designed by Hunt. The evaluation of the program revealed that it positively affected rapport building but had little effect on the behaviour it was designed to facilitate.

In a major research project, Peters (1973) attempted to develop "An identification based, inter-disciplinary theory of personal change and learning" (p.1). The prime theoretical explanation offered in this study is one of behavioural modelling while the major practical concern is the manner in which T-group participants identify attitudinally and behaviourally with the group leader. The results indicated that:

- (1) Members who display overt modelling behaviour, according to trainer and peer ratings, tend to be males who are occupationally close to the behavioural science, however, this population does not show more attitudinal identification than do others.

- (2) There is an association between the amount of identification with the trainer and the member's personal change and learning outcomes.
- (3) Behavioural modelling and attitudinal identification are independent, interactive factors which account for a high amount of variants in personal change outcomes.
- (4) While the identification among males and females with male trainers is approximately equal, resulting change outcomes only occurred with males.

The major conclusion reached was that for personality change to occur in a T-group setting, a trainer-model must be present, whose attitudes, values and behaviours must be relevant, realistically attainable and functional for group members.

T-groups were compared with six other types of participant teaching methods in a study carried out by Paploizos and Stiefel (1971). In comparison to the other methods, sensitivity training was found to be a highly effective teaching method in the areas of (a) understanding of others, (b) working with other people and (c) affect in personal values. It was rated as a poorer teaching method in cognitive or problem-solving skills.

Harrison (1966) attempted to measure changes in concept preference in interpersonal processes. It was hypothesized that T-group trained participants should use more concepts dealing with feelings, attitudes, emotions and perceptions in describing other people. It was further hypothesized that if the above were true, the extent of the change should be related to effective participation in the training activities. The results of the study supported the hypotheses, however,

it was not until between the twelfth and twenty-fourth week after the T-group that significant results occurred.

Research Related to Perceptual Changes as a Result of T-Group Participation

A number of studies have focused on the clarity and accuracy with which a person sees his own behaviour after participation in a T-group. Most studies in this area have dealt more specifically with the change in perception of actual-ideal self. Bennis, Burke, Cutter, Harrington and Hoffman (1957) assessed twelve students in an ongoing T-group using a 34 item inventory to assess changes in their perceptions of actual self and ideal self. No significant increase between actual-ideal self was found. Grater (1969) used Bill's Index of Adjustment (BIA) and found the discrepancy between member's actual self and ideal self was significantly less after participation in a T-group than before.

Burke and Bennis (1961) obtained the same results as Grater using the Group Semantic Differential. In addition they found that subjects showed more change in actual self than in perceived ideal self. Their results also indicated that the distance between the subjects ideal self and the perceptions other group members had of him was less after the T-group than before it.

Carson and Lakin (1963) replicated the Burke and Bennis study using only two groups instead of six. They improved the design, however, by adding a control factor where one of the groups completed the rating scale questionnaire six weeks prior to training thereby serving as its own control group. The results obtained were ambiguous as one group supported the results of the original study but the group serving as its own control did not change significantly.

Gassner, Gold and Snadowsky (1964) conducted a two part study using the BIA to evaluate perceptions in the first part and a modified version of the Burke and Bennis graphic rating scale to evaluate the second. Results similar to those of Grater (1959) and Burke and Bennis (1961) were obtained in Part I of the study. In Part II the number of participants in both experimental and control groups differed slightly from those in Part I. No significant decrease in the discrepancy between perceptions of actual self and ideal self were found in Part II.

French, Sherwood and Bradford (1966) conducted the first study in this area which assessed the changes in self-identity in terms of the means employed to produce them using a questionnaire with 19 bi-polar scales. Measures were taken from two, ten member, two week, T-groups at four various times from the start of the group to ten months after the group. The amount of personal feedback given to group members was experimentally manipulated over five conditions ranging from high feedback to no feedback. Most of the changes in self-identity occurred in the second week of the groups however, significant changes were still in effect in the ten month follow-up. The authors concluded that, in spite of methodological limitations, some support was given to the proposition that a person's self-identity is influenced by the opinions that others have of him and communicate to him. Increased communication was associated with increased changes in self-identity.

Changes in perceived level of personal functioning as a result of a T-group were explored by Das (1973) in a paper presented to a regional convention of the American Personnel and Guidance Association. Eight counsellor trainees in the experimental group were matched with eight other students on the variables of age and experience. A self-

anchoring scale was used to measure pre-post test changes. The results indicated that a T-group experience had a positive impact on the personal functioning of the participants while traditional methods of instruction did not.

Levels of self-acceptance and acceptance of others were examined by Rubin (1967) in a study using the Dorris, Sevinson, Hanfman Sentence Completion Test on 50 subjects enrolled in a two week residential training program. Participants' levels of acceptance of self and others were found to increase significantly.

Oshry and Harrison (1966) conducted the only study reviewed concerning changes in locus of control as a result of T-group participation. Implimenting the Problem Analysis Questionnaire (PAQ) they hypothesized that, with regard to the focus of work-related problems, participants should (a) increase in perceived importance of self as a problem cause, (b) decrease in perceived importance of others as causes and (c) decrease in perceived importance of environmental factors as causes. Support was found for all three hypotheses. In addition it was found that participants changed in their perception of their jobs.

Using the TAT and the Draw a Person Test (DAP), Feltz (1967) investigated the effects of a T-group on the perceptual flexibility, self-concept and personality orientation of elementary school teachers. Through a coding and a categorization of tape recorded and drawn responses two instruments were developed to assess the changes in the above factors on 24 variables. Analysis of the data indicated that the T-group had no significant effect on the above three personality factors of elementary teachers.

Another aspect of a study by Weldon (1971), outlined above, was the effect of a T-group on the self-esteem of members. He found

that a significant positive change occurred on this variable as a result of T-group participation.

Zander (1971) studied the perceptions of group members on variables relating to the perceived effectiveness and attractiveness of their T-group. The study was carried out in a large class composed of 13 self selected groups with five to seven members in each group. Three measures of attitudes were taken. Groups were required to compose a cooperative paper. Each group member received the same mark on the paper which was worth 25% of the final grade. No measures of performance feedback were given to the groups. The results indicated that: (a) perceptions of group effectiveness tend to increase over time, (b) individual performance tends to be perceived as increasing over time, (c) motivation tends to improve over time, (d) high desire for group success tends to precede greater expressed satisfaction with group performance, (e) satisfaction with one's own performance tends to follow favourable evaluations of the group but not higher desire for group success and (f) attraction to group tends to follow greater involvement but not perception of higher group performance.

Literature Related to Personality Changes as a Result of T-group Participation

A few studies have attempted to assess overall personality changes as a result of T-group participation. These have generally met with poor success. Cooper and Mangham (1971) postulated that ". . . it may be that interest in this area is slight because changes in such fundamental personality traits may be just too much to expect in such a short-lived experience" (p.33).

Zimet and Fine (1955) developed a Picture Story Test

(PST) composed of six pictures from the TAT, six from the School Apperception Test (SAT) and six from a previous research study. The PST was used to measure change on the variables of attitude toward self, attitude toward other adults, and attitude towards children. The Combs Desire List (CDL) was used to measure change in motivation. The instruments were administered in a pre - post test design to 15 chief public school administrators attending a human relations seminar. Results of the PST indicated movement in the direction of adequacy, liking, acceptance and equality. Positive changes in motivation were also detected by the CDL.

In a "locus of directedness" study, Kassarian (1965), investigated whether there was a shift toward inner or outer directedness after an extensive T-group experience. The instrument used was the Inner-Outer Social Preference Scale which was administered simultaneously in a pre - post test design to both experimental and control group subjects. Analysis of the data indicated that the effects of a T-group do not seem to be related to change in either direction.

Calliotte (1972) conducted a wide range study investigating the effects of a group experience on the personality traits and Rogerian factors relating to teacher-student relationships. The 16 Personality Factors (16 PF) was administered to 42 student teachers divided evenly in a matched experimental and control group. Results indicated that the experimental group alone changed significantly on the variable of Surgency which the author claims has been the variable most consistently related to teacher success in related research. Other significant changes in the groups were attributed to a student teaching experience rather than the T-group. Following the study

the Truax Relationship Questionnaire was administered to one class that each teacher taught. A highly significant correlation was found between student's perceptions of their teacher's effectiveness and their perceptions of their teacher's positive relationship characteristics.

Miles (1965) conducted research among a population of elementary school principals attending a two week laboratory at Bethel. The 34 principals in the experimental group each nominated another principal they viewed as being similar to themselves to serve as a control group. A second control group consisted of a group of 148 principals drawn randomly from a national directory. Miles found that changes resulting from training seemed primarily associated with factors relating to relaxed, active participation in sessions and the reception of feedback. Personality factors such as ego strength, flexibility and need affiliation were found to affect learner change only indirectly by conditioning participation in sessions.

Previous Research Related to the RUPS Workshop

Three evaluational field studies have previously been done on the RUPS program. The first was conducted by the publishers during the development of the program and prior to its public release. A second study was done in 1969 when the Idaho Consortium for EDPA conducted a series of RUPS workshops and was reported to the publishers by Bell and Keating in 1970. A third study involved a workshop conducted by the developer for a population of educational researchers in 1972. The results of the three studies are contained in Jung, Butman and Rothlind (1972). The results of each study will be briefly summarized below.

Jung, Butman and Rothlind (1972) reveal that the research done on the RUPS program is far from ideal. Five sites were chosen for the original study on no other apparent criteria than commercial related factors such as the money, time and material facilities available from each site. Participants in the study were chosen by the sites involved.

Data was gathered on the first day of the workshop by:

- (a) a background information questionnaire containing demographic and attitudinal variables, (b) a multiple choice comprehension test of concepts and definitions contained in the RUPS materials and (c) a test in the application of a force field problem solving technique.

The multiple choice test and the test in applying a force field were re-administered on the last session of the workshop as was a questionnaire regarding attitudes toward the workshop and the expected utilization of the skills covered. A six month follow-up, mailed questionnaire contained the multiple choice test and questions involving the actual back home use of the RUPS materials and concepts. The study was plagued by unreturned results and lost data.

The five sites from which results were obtained were very diverse with respect to their education status, experience and reasons for attending the workshop. Much inconsistency occurred in the content of the programs at the different sites. Much difference existed between the orientation and experience of the trainers involved.

The results of the study indicated that there was great variation among sites regarding attitudes towards the RUPS program. There was a trend toward teachers being most satisfied and student teachers being least satisfied with the RUPS workshop. All sites

from which data was available showed significant increases in the comprehension of the RUPS concepts. A strong halo effect was noted on the results of the attitude questionnaires.

In a second study the content of the RUPS program administered to a population of 115 was slightly different than that of the above study. In this case the trainers were all university professors. No measure of comprehension was taken among this group, however, a semantic differential was used to test evaluative and understanding bi-polar scale responses to seven RUPS concepts. Significant changes occurred on this measure but the direction of the change is not reported. This group submitted a fairly positive evaluation of the RUPS program. No information is provided for this group regarding follow-up use.

The third study involved a population of 19 educational researchers. The trainer was one of the developers of the RUPS program. A generally high favourable evaluative response was given to RUPS by this group. No information regarding comprehension or back home application is provided.

On the basis of results of the three studies combined, the authors make several findings and conclusions. No significant relationship was found between either overall attitudes, ratings of the RUPS or pre - post tests of comprehension. It is postulated that use of the RUPS skills and concepts following the workshop depends on the extent to which the participants involve their colleagues back home. The results also indicate that many participants used the RUPS methods to effect personal changes even though that was not the primary focus of the workshop. Factors affecting learning in the workshop are said to be the 'set' of the person upon entering and

whether or not the person has a "real" problem situation at hand to which he can apply the skills. In conclusion the authors recommend that the RUPS program not be conducted with groups who have recently been exposed to a traditional unstructured T-group experience.

Summary of the Literature

The literature reviewed was generally supportive of the inclusion of T-groups as an aspect of the teacher education process. This support was forthcoming from studies which found significant results and benefits derived from T-groups as well as from those which did not.

Mixed results characterized the studies reviewed concerning the effects of a T-group on attitudinal change, behavioural change, perceptual change and personality change. In each of the above areas, more studies found that significant changes occurred as a result of T-group participation than not. Since this study was not exhaustive in attempting to include all research carried out in the area, the above may or may not be an accurate portrayal of the current state of group change research.

In summary the research is inconclusive as to whether T-groups bring about participant changes in attitudes, behaviours, perceptions or personalities. Many researchers appear optimistic that improved research design and more sensitive instruments reduce the ambiguity in this area of research.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate what effects, if any, a structured T-group experience, taught within the context of an introductory guidance course, had on the behavioural characteristics and attitudes of the participants.

The investigation commenced with the selection of three sections out of the eight being offered to serve as experimental groups. Criteria for the selection of experimental groups were that the RUPS program was included in the curriculum and that the participants would not be exposed to unstructured T-group activities as part of the course. One section that met the above criteria was rejected because all of the students in it had a previous university degree and because the writer was the RUPS trainer in that section. The section selected for the control group was one in which the RUPS program was not being offered and in which no instructional T-group activities were proposed as being included in the curriculum. A description of the four groups is outlined below.

GROUP I

The instructor in this course was a graduate teaching assistant who also served as the trainer in the RUPS workshop. The content covered in the course was mainly directed toward the cognitive and theoretical aspects related to the guidance and counselling processes. Forty-two people were originally registered in this section. Of these, one person withdrew part way through the half course and

two people were auditing the course. Complete results were obtained for twenty seven members of this section. Five subjects completed only one of the instruments used and were therefore not included in the study. Another person did not participate in the RUPS program and the results submitted were not included in the study. Nine members of this class therefore, were either absent at the time the instruments were administered or else declined to participate in the study. The instruments were administered to this sample by the author and were completed by students outside of class time. Administration occurred four days before and two days after participation in the RUPS workshop which was conducted over a period of 18 hours over 2 and a half days.

GROUP II

This section was the only one included in the study where the instructor and the RUPS trainer was a professor. The main curriculum emphasis in this section was on the theoretical and cognitive aspects of the guidance and counselling processes. The official enrollment at the beginning of this half course was fifty-five, however, one person later withdrew from the course. Two auditors were included among this sample. From the above total, forty-three completed returns were received and included in this study. Five subjects completed only one of the instruments and were therefore not included in the study. The data submitted by one subject was not included in the study because several questions were left unanswered and hence it was deemed to be an inaccurate measure. Five subjects were either absent at the time the instruments were administered or declined to participate in the study. The method of administration, times of administration and the

conduct of the RUPS workshop were similar to that of Group I, however in this group, administration was carried out by the professor.

GROUP III

Thirty-two students were enrolled in this section, instructed by a graduate teaching assistant who was also the RUPS trainer. Of this number, completed returns used in the study were received from twenty-four students. One student completed only one of the instruments and was not included. Another subject was rejected because the results obtained were inconsistent on the Infrequency scale of the PRF which serves as a "lie detector". Upon handing in the results this subject declared that the answers were 'faked'. Six students were absent at the time the instruments were administered. Administration of the instruments was done by the author during two ninety-minute class periods allotted by the instructor. The first administration occurred two days prior to engagement in the RUPS workshop while the last occurred five days after the workshop was completed. In this instance the RUPS workshop was conducted during class time over a two month period. While much of the course content was theoretically or cognitively oriented, some exercises in counselling techniques and communication skills in addition to those contained in the RUPS workshop, were conducted.

GROUP IV

This group, which was selected as a control, had an official enrollment of thirty-seven. Due to a combination of inclement weather conditions and communication difficulties between the researcher and

the instructor, completed results for thirteen subjects were obtained for inclusion in this study. Eleven students completed only one of the instruments and were not included in the sample. An additional thirteen subjects were either absent for the administration of the instruments or declined to participate in the study. The course content covered theoretical, cognitive and affective aspects of guidance and counselling. One of the criterion for selecting this group as a control, as mentioned above, was that no unstructured T-group activities were planned as part of the course. This condition was not met since, after the initial administration of instruments, the graduate teaching assistant deemed it in the best interests of the class to hold a one day unstructured T-group. Instrument administration was conducted by the author. Students completed the instruments out of class and returned them the following class period. A four week time period existed between the two administrations.

Administration of the Instruments

Instrumentation consisted of the PRF (Form BB) and the DTB which, as revealed above, were administered to the one hundred seven subjects involved in this study.

The directions for the PRF, given prior to handing out the instruments, were uniform for all groups and were as follows: (a) Read each of the following statements and decide whether it describes you. If you agree, mark true. If you disagree, answer false, (b) Try to answer according to your first impressions of the item and don't spend too long thinking about your answer and (c) Please answer all statements.

The instructions given to all groups, prior to the administration of the DTB were as follows: (a) Read the following statements. If you strongly resist the statement, blacken the space under column 1. If you resist the statement mark the space under column 2. If you are undecided about the statement mark column 3. If you support the statement mark column 4 and if you strongly support the statement mark column 5. The two other directions given were the same as the last two for the PRF.

In all groups, for the initial administration, the PRF was handed out to every second member of the class according to rows. The DTB was then handed to the students who did not receive the PRF.

At the second administration, the PRF was distributed to those subjects who had previously completed the DTB at the first administration. The DTB was then handed out to subjects who had previously completed the PRF. Directions for completing the instruments were as outlined above.

Scoring

The scoring of the PRF was accomplished by means of a commercial template which, when placed over the answer sheet, enables the scorer to count up the number of responses marked on each scale. These sums for each of the variables comprised the raw scores which were used in the statistical analysis of the data.

The scoring of the DTB was somewhat more complex than that outlined above. Templates were designed, by the author, to facilitate scoring. Most of the items on the DTB were scored according to the column in which they appeared; that is a score of 1 was awarded for a

mark in column one, a score of 2 for a mark in column two and so on. The exception to this system occurred on the scale of Student Autonomy vs Teacher Control where, due to the bi-polarity of the scale and the wording of the statements, the reverse order of scoring was applied. Under this scoring system a mark in column 1 was awarded a score of five, a mark in column 2 was given a score of four and so on. The items effected on this scale were questions 5, 14, 23, 32, 41, 50, 59, 67, 74 and 82 as they appear on the form as displayed in Appendix A Totals were tallied for each variable and these sums represented the raw scores subjected to statistical analysis in this study.

Description of Instruments

The Dimensions of Teacher Beliefs

The DTB was the outcome of a research study conducted by Leslie J. Wehling and W.W. Charters, Jr. and, in their words represents, ". . . the principle dimensions of teachers' beliefs systems regarding the classroom teaching-learning process" (p.7). The study covered much of the area which was previously the domain of the MTAI. The authors, state, however, that three important differences exist between the MTAI and the DTB. These are: (a) item construction in the DTB sought to emphasize cognitive aspects, (b) no attempt was made in the DTB to formulate dimensions within the framework of their relevance for teacher effectiveness and (c) the DTB is not primarily organized according to bi-polar scales (Wehling and Charters p.8). The DTB contains 86 items which measure eight dimensions of teacher beliefs. These dimensions evolved as a result of studies involving questionnaire administrations and factor analysis. For a more detailed description of this instrument the reader is referred to Wehling and Charters (1969).

The authors of the DTB present the statements involved in the questionnaire categorized under the various dimensions to which they relate. On the DTB questionnaire used in this study the items as presented in Wehling and Charters (1969) had been randomly arranged so as to prevent response bias. Table I provides the eight dimensions of teacher beliefs and an explanatory description of them. Although little information on the reliability and the validity of the DTB is available, the eight dimensions of teacher beliefs represent the factors which emerged consistently over several replications of the study.

TABLE I
DESCRIPTION OF DTB SCALES

SCALE	DESCRIPTION
Subject Matter Emphasis (SME)	This dimension represents the teacher's belief that the subject-matter content of a course - the facts and informational skills, principles, and disciplines of thought - has educational value in and of itself. This is most aptly phrased in the teacher's conception that the student <u>must</u> master the course content.
Personal Adjustment Ideology (PAI)	This is the belief that the instructional process should be organized around student interests and needs in order to contribute to social and emotional development. A central ingredient is the view that teachers should take an intense interest in students and their problems. Yet this belief does not reflect the teacher's inclination to establish warm, personal relationships with the students.
Student Autonomy vs Teacher Direction or Control (SATD)	This is a bi-polar scale reflecting the teacher's conception of the appropriate locus of control over the classroom learning process - lying either with the teacher or with the students. In a sense, it expresses the amount of faith the teacher has in students and their capacity for spontaneous learning.
Emotional Disengagement (ED)	This scale indicates the extent to which a teacher believes that a certain social distance must be maintained between the teacher and students in the classroom if a group climate conducive to learning is to prevail. High scorers believe that the most effective relationship is one in which the teacher holds himself somewhat aloof from the affairs of students and does not allow himself to become personally engrossed in the concerns and problems of each individual

TABLE I (continued)

SCALE	DESCRIPTION
Consideration of Student Viewpoint (CSV)	This dimension represents teacher acceptance of empathy as an instructional strategy. Involved is the ability to take the student's perspective on the world and to give them his warmth and personal support as needed.
Classroom Order (CO)	This is the belief that the best learning situation is one in which there is a high degree of order and decorum in the classroom, and appears to reflect a fundamental personality disposition in teachers. It expresses the teacher's belief in conducting the class according to established rules and procedures, quick punishment for those who depart from the rules, and the elimination of nonsense, noise and distractions.
Student Challenge (SC)	This is the belief that, to induce learning, the teacher must be sure that the students are constantly challenged by tasks beyond their easy grasp. Learning only occurs when students (and by implication the teacher, too) are working hard.
Integrative Learning (IL)	Represented here is the teacher's belief that students truly understand what they are taught only when they are brought to see relationships between the subject at hand and broader aspects of their world or are able to connect the subject to their own experiences.

Wehling and Charters (1969) pp. 12-15.

The Personality Research Form (Form BB)

This instrument, containing 440 statements and measuring 22 personality factors, was constructed under the direction of Douglas N. Jackson between the years 1962-1967. The scales of the PRF are based on those originally defined by Henry Miller in 1938 but differ in the fact that all PRF scales are bi-polar. Statistical analysis has revealed that the PRF scales have large standard deviations and high reliabilities. This instrument has received generally favourable reviews in Buros (1972). One of the major criteria for the use of the PRF in this study was that its focus is primarily upon areas of normal functioning rather than upon psychopathology.

The PRF Manual (Jackson 1967) and Buros (1972) contain data pertaining to the many reliability and validity studies which have been conducted on this instrument or which have been incorporated into its development. Odd-even reliability coefficients for the individual trait scales range from .48 to .90. K-R coefficients range from .54 to .86. Retest reliability ranged from .69 to .90. Studies yielding a median r of .52 with peer ratings and .56 with self-ratings are deemed by reviewers to provide good evidence of both convergent and discriminant validity.

Table II contains the scales of the PRF and a description of high scorers.

TABLE II
PERSONALITY RESEARCH FORM SCALES

SCALE	DESCRIPTION OF HIGH SCORER
Abasement	Shows a high degree of humility, accepts blame and criticism even when not deserved; exposes himself to situations where he is in an inferior position; tends to be self-effacing.
Achievement	Aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put forth effort to attain excellence.
Affiliation	Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people.
Aggression	Enjoys combat and argument; easily annoyed; sometimes willing to hurt people to get his way; may seek to "get even" with people whom he perceives as having harmed him.
Autonomy	Tries to break away from restraints, confinements or restriction of any kind; enjoys being unattached, free, not tied to people, places, or obligations; may be rebellious when faced with restraints.
Change	Likes new and different experiences; dislikes routine and avoids it; may readily change opinions or values in different circumstances; adapts readily to change of environment.

TABLE II (continued)

SCALE	DESCRIPTION OF HIGH SCORER
Cognitive Structure	Does not like ambiguity or uncertainty in information; wants all questions answered completely; desires to make decisions based upon definite knowledge, rather than upon guesses or probabilities.
Defence	Readily suspects that people mean him harm or are against him; ready to defend himself at all times; takes offense easily; does not accept criticism readily.
Dominance	Attempts to control his environment, and to influence or direct other people; expresses opinions forcefully; enjoys the role of leader and may assume it spontaneously.
Endurance	Willing to work long hours; doesn't give up quickly on a problem; persevering, even in the face of great difficulty; patient and unrelenting in his work habits.
Exhibition	Wants to be the center of attention; enjoys having an audience; engages in behaviour which wins the notice of others; may enjoy being dramatic or witty.
Harmavoidance	Does not enjoy exciting activities, especially if danger is involved; avoids risk of bodily harm; seeks to maximize personal safety.
Impulsivity	Tends to act on the "spur of the moment" and without deliberation; gives vent readily to feelings and wishes; speaks freely; may be volatile in emotional expression.

TABLE II (continued)

SCALE	DESCRIPTION OF HIGH SCORER
Nurturance	Gives sympathy and comfort; assists others whenever possible, interested in caring for children, the disabled, or the infirm; offers a "helping hand" to those in need; readily performs favours for others.
Order	Concerned with keeping personal effects and surroundings neat and organized; dislikes clutter, confusion, lack of organization; interested in developing methods for keeping materials methodically organized.
Play	Does many things "just for fun;" spends a good deal of time participating in games, sports, social activities, and other amusements; enjoys jokes and funny stories; maintains a ligh-hearted, easy-going attitude toward life.
Sentience	Notices smells, sounds, sights, tastes, and the way things feel; remembers these sensations and believes that they are an important part of life; is sensitive to many forms of experiences; may maintain an essentially hedonistic or aesthetic view of life.
Social Recognition	Desires to be held in high esteem by acquaintances; concerned about reputation and what other people think of him; works for the approval and recognition of others.
Succorance	Frequently seeks the sympathy, protection, love, advice, and reassurance of other people; may feel insecure or helpless without such support; confides difficulties readily to a receptive person.

TABLE II (continued)

SCALE	DESCRIPTION OF HIGH SCORER
Understanding	Wants to understand many areas of knowledge; values synthesis of ideas verifiable generalization, logical thought, particularly when directed at satisfying intellectual curiosity.
Infrequency	Responds in implausible or pseudo-random manner, possibly due to carelessness, poor comprehension, passive non-compliance, confusion, or gross deviation.
Desirability	Describes self in terms judged as desirable; consciously or unconsciously, accurately or inaccurately, presents favourable picture of self in responses to personality statements.

Analysis

The statistical analysis of the data was carried out as follows:

1. A one-way analysis of variance was carried out to determine whether any difference existed among the four groups on the pre-treatment or initial administration of the PRF. The same analysis revealed differences, if any, among groups on the post treatment data of the DTB.
2. A second one-way analysis of variance was carried out to assess whether any differences existed among the four groups on the pre-treatment or initial administration of the DTB. This analysis also revealed differences, if any, among groups on the post treatment data of the PRF.
3. A series of T-tests were done between pre-treatment and post-treatment scores on each of the 30 variables for each of the groups to measure changes that occurred as a result of T-group participation. The scores of subjects in each group, who took the PRF initially were compared with the scores of those who took the PRF as a final measure. The scores of the DTB were compared in a similar manner.
4. A correlational matrix, giving values of Pearson's r was developed in an attempt to determine whether there was any relationship between subjects' behavioural characteristics as measured by the PRF and their attitudes as measured by the DTB.

CHAPTER IV

RESULTS

The purpose of this study was to see if a structured T-group experience effected any change in the behavioural characteristics or beliefs about teaching of student teachers and, if so, what changes occurred. A secondary purpose of the study was to see if there was any relationship between the behavioural characteristics of student teachers and their dimensions of teacher beliefs.

The DTB and the PRF were administered to students enrolled in four introductory guidance classes. Three classes served as experimental groups while the fourth class, which did not do the RUPS workshop served as a control. The PRF was randomly administered to one half of the members of each class. The DTB was administered to the remaining one half of the class members. Following participation in the RUPS workshop, the experimental group subjects were administered the opposite test to that which they received as a pre-treatment measure.

Hypothesis Testing

The subjects' raw scores on the 22 scales of the PRF and the 8 scales of the DTB were statistically analyzed to support or reject, at a significance level of .05, the following null hypotheses:

1. There is no significant difference between the respective scores of those students who took the PRF before participation in the T-group and the corresponding scores of those students who took the PRF after participation in the T-group.

2. There is no significant difference between the respective scores of those students who took the DTB before participation in the T-group and the corresponding scores of those students who took the DTB after participation in the T-group.

3. There is no significant relationship between subjects' behavioural characteristics and their dimensions of teacher beliefs.

In an effort to determine whether the groups were similar with respect to the behavioural variables, as measured by the PRF prior to treatment, an analysis of variance procedure was carried out on the raw scores of those subjects who took the PRF as a pre-treatment measure. Table III reveals that the four pre-treatment groups differed significantly on the variables of Defence and Sentience. The group also tended to differ on the variable of Play, however, this difference was not significant.

TABLE III

SUMMARY OF ANALYSIS OF VARIANCE AMONG FOUR
GROUPS ON PRF PRE-TREATMENT SCORES

PRF SCALE	GROUP		ERROR		F	P
	SS	DF	SS	DF		
Abasement	.1750	3	.3899	52	.78	.512
Achievement	.6496	3	.6357	52	.18	.911
Affiliation	.9313	3	.6325	52	.26	.857
Aggression	.2658	3	.3703	52	1.24	.303
Autonomy	.3082	3	.6734	52	.79	.503
Change	.2693	3	.3901	52	1.20	.320
Cognitive Structure	.1909	3	.7643	52	.43	.730
Defendence	.6106	3	.3479	52	3.04	.037
Dominance	.1330	3	.1094	52	.21	.889
Endurance	.2419	3	.4563	52	.92	.438
Exhibition	.4200	3	.1037	52	.70	.555
Harmavoidance	.1154	3	.1269	52	1.58	.206
Impulsivity	.1213	3	.8512	52	.25	.863
Nurturance	.1010	3	.4495	52	.39	.761
Order	.2478	3	.1050	52	.41	.747
Play	.6979	3	.4533	52	2.67	.057
Sentience	.7460	3	.3390	52	3.81	.015
Social Recognition	.2561	3	.7244	52	.61	.610
Succorance	.1294	3	.7671	52	.29	.831
Understanding	.3128	3	.9107	52	.60	.621
Infrequency	.3899	3	.3674	52	.18	.907
Desirability	.4492	3	.3589	52	2.17	.103

The Scheffe test for the multiple comparison of means, the results of which are presented in Table IV, revealed that the difference on the Defence scale existed primarily between Group I and Group III. Table IV also revealed a non-significant trend towards difference between Group I and Group II on the Sentence variable.

TABLE IV
PROBABILITY MATRICES FOR SCHEFFE MULTIPLE
COMPARISON OF MEANS FOR PRE-TREATMENT SCORES WHERE
SIGNIFICANT DIFFERENCES WERE OBSERVED AMONG GROUPS

SCALE	GROUPS	I	II	III	IV
Defence	IV	.6660	.9748	.7029	1.000
	III	.0412	.2245	1.000	
	II	.7480	1.000		
	I	1.000			

SCALE	GROUPS	I	II	III	IV
Sentence	IV	.9952	.1634	.2456	1.000
	III	.1763	.9999	1.000	
	II	.0794	1.000		
	I	1.000			

Extreme differences in variances were observed among the four groups on the Sentence variable which would tend to render the difference obtained by the analysis of variance as being unreliable.

The same analysis of variance procedure was carried out to determine whether any differences existed among the pre-treatment groups with respect to their dimensions of teacher beliefs, as measured

by the DTB. Table V indicates that the groups who took the DTB as a pre-treatment measure were not significantly different in their attitudes. A nonsignificant trend towards difference was noted on the Student Challenge variable.

TABLE V
SUMMARY OF ANALYSIS OF VARIANCE AMONG FOUR
GROUPS ON DTB PRE-TREATMENT SCORES

DTB SCALE	GROUP		ERROR		F	P
	SS	DF	SS	DF		
Subject Matter Emphasis	.1281	3	.1525	47	1.32	.280
Personal Adjustment Ideology	.1149	3	.1556	47	1.16	.336
Student Autonomy vs. Teacher Direction	.3098	3	.2688	47	1.81	.159
Emotional Disengagement	.1413	3	.2278	47	.97	.414
Consideration of Student Viewpoint	.9500	3	.1024	47	.15	.932
Classroom Order	.3025	3	.1688	47	.28	.839
Student Challenge	.6241	3	.4055	47	2.41	.079
Integrative Learning	.8475	3	.1202	47	1.10	.357

Table VI summarizes the means and standard deviations of the four pre-treatment groups on the PRF scores and Table VII provides the same information for pre-treatment scores on the DTB.

TABLE VI

SUMMARY OF MEANS AND STANDARD DEVIATIONS
OF FOUR GROUPS ON PRF PRE-TREATMENT SCORES

SCALE	GROUP	MEAN	S.D.	SCALE	GROUP	MEAN	S.D.
Abasement	I	5.813	2.344	Cognitive Structure	I	10.250	3.357
	II	5.905	2.862		II	9.191	3.708
	III	7.250	3.279		III	9.333	2.807
	IV	6.286	2.059		IV	10.714	6.237
Achievement	I	11.875	2.754	Defendence	I	8.189	2.228
	II	12.714	3.717		II	7.238	2.700
	III	12.250	3.720		III	5.250	2.346
	IV	12.286	3.946		IV	6.714	3.352
Affiliation	I	14.063	2.768	Dominance	I	9.063	5.000
	II	14.762	3.562		II	10.048	4.399
	III	15.083	4.209		III	9.833	4.367
	IV	14.143	3.388		IV	8.857	4.525
Aggression	I	6.063	3.022	Endurance	I	10.813	3.060
	II	6.191	2.482		II	11.810	3.140
	III	4.667	2.270		III	12.418	2.906
	IV	4.714	2.984		IV	12.571	2.070
Autonomy	I	8.813	3.970	Exhibition	I	7.438	4.718
	II	8.857	3.336		II	8.191	3.683
	III	10.667	3.114		III	7.750	4.615
	IV	9.571	4.237		IV	10.286	5.736
Change	I	11.500	3.141	Harmavoidance	I	11.750	5.040
	II	12.381	2.355		II	10.048	5.277
	III	12.833	3.215		III	9.083	4.795
	IV	10.714	1.704		IV	13.571	3.599

TABLE VI (continued)

SCALE	GROUP	MEAN	S.D.	SCALE	GROUP	MEAN	S.D.
Impulsivity	I	9.875	4.319	Social Recognition	I	10.438	3.306
	II	8.952	3.584		II	9.238	4.194
	III	9.833	3.881		III	8.583	2.938
	IV	8.857	4.981		IV	9.571	4.353
Nurturance	I	13.188	3.188	Succorance	I	8.750	4.480
	II	14.191	2.750		II	8.714	3.243
	III	13.917	3.370		III	7.583	3.053
	IV	14.143	1.865		IV	8.857	5.047
Order	I	10.188	4.834	Understanding	I	11.063	4.139
	II	11.095	4.061		II	12.476	3.642
	III	9.333	3.985		III	10.833	4.840
	IV	10.143	5.699		IV	10.857	4.670
Play	I	11.250	3.276	Infrequency	I	0.688	1.015
	II	11.810	2.732		II	0.667	0.856
	III	13.167	2.691		III	0.583	0.515
	IV	9.286	3.251		IV	0.429	0.787
Sentience	I	14.875	3.828	Desirability	I	14.500	2.781
	II	17.143	1.493		II	16.143	2.903
	III	17.083	1.677		III	15.583	2.429
	IV	14.571	2.699		IV	17.286	1.254

TABLE VII

SUMMARY OF MEANS AND STANDARD DEVIATIONS
OF FOUR GROUPS ON DTB PRE-TREATMENT SCORES

SCALE	GROUP	MEAN	S.D.	SCALE	GROUP	MEAN	S.D.
Subject Matter Emphasis	I	53.455	6.991	Consideration of Student Viewpoint	I	37.818	3.843
	II	51.227	4.869		II	38.500	4.405
	III	49.083	5.962		III	37.500	5.808
	IV	49.333	5.429		IV	37.667	4.412
Personal Adjustment Ideology	I	56.000	4.219	Classroom Order	I	44.000	6.293
	II	59.955	6.807		II	42.545	5.755
	III	58.500	4.871		III	43.583	6.388
	IV	58.500	5.357		IV	41.667	5.428
Student Autonomy vs. Teacher Direction	I	67.727	5.746	Student Challenge	I	24.364	2.976
	II	68.727	9.300		II	26.045	2.984
	III	73.833	6.617		III	24.667	2.839
	IV	72.667	3.446		IV	22.667	2.875
Emotional Disengagement	I	12.273	2.005	Integrative Learning	I	55.455	4.390
	II	11.227	2.245		II	54.182	5.020
	III	10.750	2.454		III	54.667	6.035
	IV	11.500	1.761		IV	58.333	3.984

The same procedure, as outlined above, was carried out to determine whether any differences existed among groups in either behavioural characteristics or attitudes after participation in the T-group. The results of the analysis of variance presented in Table VIII reveal no significant differences in behavioural characteristics as measured by the PRF existed in post-treatment groups.

TABLE VIII
SUMMARY OF ANALYSIS OF VARIANCE AMONG FOUR
GROUPS ON PRF POST-TREATMENT SCORES

PRF SCALE	GROUPS		ERROR		F	P
	SS	DF	SS	DF		
Abasement	.1338	3	.4028	47	.05	.984
Achievement	.2912	3	.3768	47	1.21	.316
Affiliation	.6191	3	.3744	47	.26	.854
Aggression	.2821	3	.4523	47	.98	.411
Autonomy	.3732	3	.4608	47	1.27	.296
Change	.4366	3	.3913	47	1.75	.170
Cognitive Structure	.3906	3	.3360	47	0.00	.999
Defendence	.3788	3	.3360	47	1.77	.167
Dominance	.6289	3	.7604	47	.13	.942
Endurance	.6932	3	.4933	47	2.20	.100
Exhibition	.3215	3	.5889	47	.86	.471
Harmavoidance	.1149	3	.1036	47	1.74	.172
Impulsivity	.5082	3	.7715	47	.10	.958
Nurturance	.2211	3	.4245	47	.82	.492
Order	.1957	3	.7947	47	.04	.616
Play	.1957	3	.7947	47	.04	.990
Sentience	.3883	3	.4378	47	.14	.936
Social Recognition	.3163	3	.6044	47	.82	.489
Succorance	.5378	3	.8366	47	1.01	.398
Understanding	.1207	3	.6666	47	.28	.837
Infrequency	.1381	3	.2513	47	.86	.468
Desirability	.1091	3	.2588	47	.66	.581

The results of the analysis of variance among the post-treatments groups on the scores of the DTB are provided in Table IX. This information reveals that the groups differed significantly on the scale of Student Autonomy vs. Teacher Direction. A non-significant trend toward difference on the scale of Student Challenge is also indicated. Table X reveals that Group II and Group IV tended to differ on the SATD scale, however, the difference is not significant.

TABLE IX
SUMMARY OF ANALYSIS OF VARIANCE AMONG FOUR
GROUPS ON DTB POST-TREATMENT SCORES

DTB SCALE	GROUP		ERROR		F	P
	SS	DF	SS	DF		
Subject Matter Emphasis	.2616	3	.3114	52	1.46	.237
Personal Adjust- ment Ideology	.5944	3	.2839	52	.36	.780
Student Autonomy vs. Teacher Direction	.5127	3	.2412	52	3.68	.018
Emotional Disengagement	.8297	3	.3391	52	.42	.736
Consideration of Student Viewpoint	.1788	3	.1061	52	.29	.831
Classroom Order	.1251	3	.3135	52	.69	.561
Student Challenge	.5051	3	.3717	52	2.36	.083
Integrative Learning	.3956	3	.2541	52	.27	.847

TABLE X
 PROBABILITY MATRICES FOR SCHEFFE MULTIPLE
 COMPARISON OF MEANS FOR POST-TREATMENT SCORES WHERE
 SIGNIFICANT DIFFERENCES WERE OBSERVED AMONG GROUPS

SCALE	GROUPS	I	II	III	IV
Student Autonomy vs Teacher Direction	IV	.1700	.0626	.8863	1.000
	III	.4096	.1630	1.000	
	II	.9602	1.000		
	I	1.000			

The means and standard deviations associated with post-treatment groups on the PRF and the DTB are provided in Table XI and Table XII respectively.

TABLE XI
SUMMARY OF MEANS AND STANDARD DEVIATIONS
OF FOUR GROUPS ON PRF POST-TREATMENT SCORES

SCALE	GROUP	MEAN	S.D.	SCALE	GROUP	MEAN	S.D.
Abasement	I	6.364	4.567	Cognitive Structure	I	9.818	3.281
	II	6.318	2.418		II	9.773	2.927
	III	6.667	1.557		III	9.750	3.306
	IV	6.167	2.994		IV	9.833	3.764
Achievement	I	11.727	2.649	Defendence	I	8.727	2.901
	II	12.273	2.567		II	7.682	2.496
	III	11.083	3.895		III	6.250	3.195
	IV	13.667	0.517		IV	8.167	1.329
Affiliation	I	14.909	3.590	Dominance	I	8.182	4.708
	II	14.591	2.520		II	8.227	4.185
	III	14.333	2.535		III	8.917	3.679
	IV	15.500	2.881		IV	9.000	2.098
Aggression	I	5.455	2.841	Endurance	I	11.546	2.067
	II	4.909	3.146		II	11.773	3.939
	III	6.083	3.204		III	9.333	2.807
	IV	7.167	3.189		IV	13.000	2.757
Autonomy	I	10.455	2.067	Exhibition	I	5.818	3.842
	II	8.727	2.798		II	7.682	2.934
	III	8.917	3.801		III	7.917	4.078
	IV	10.833	4.355		IV	7.500	3.937
Change	I	11.455	3.417	Harmavoidance	I	12.909	5.338
	II	11.636	2.682		II	13.909	4.628
	III	12.000	2.089		III	10.167	4.707
	IV	14.500	3.886		IV	11.667	3.386

TABLE XI (continued)

SCALE	GROUP	MEAN	S.D.	SCALE	GROUP	MEAN	S.D.
Impulsivity	I	8.546	3.297	Social Recognition	I	10.364	3.585
	II	8.591	4.490		II	10.773	3.939
	III	9.333	3.601		III	9.667	3.339
	IV	8.833	4.401		IV	8.333	2.338
Nurturance	I	13.455	3.698	Succorance	I	9.182	3.656
	II	15.000	2.690		II	10.182	3.788
	III	15.083	3.370		III	10.167	5.557
	IV	15.167	1.472		IV	7.000	3.521
Order	I	9.546	4.612	Understanding	I	12.364	3.264
	II	11.136	3.771		II	11.136	3.895
	III	9.333	4.579		III	11.333	3.985
	IV	9.667	5.645		IV	11.833	3.656
Play	I	11.364	2.976	Infrequency	I	0.636	1.027
	II	11.455	4.543		II	0.500	0.740
	III	11.667	4.053		III	0.250	0.452
	IV	12.000	4.290		IV	0.167	0.408
Sentience	I	16.182	1.601	Desirability	I	16.091	2.468
	II	15.500	3.067		II	16.273	2.434
	III	15.667	3.798		III	15.333	2.462
	IV	16.000	3.347		IV	16.833	1.169

TABLE XII

SUMMARY OF MEANS AND STANDARD DEVIATIONS
OF FOUR GROUPS ON DTB POST-TREATMENT SCORES

SCALE	GROUP	MEAN	S.D.	SCALE	GROUP	MEAN	S.D.
Subject Matter Emphasis	I	49.813	4.983	Consideration of Student Viewpoint	I	37.000	4.382
	II	49.000	8.313		II	38.381	5.277
	III	45.500	10.059		III	38.000	3.838
	IV	52.857	6.4195		IV	38.000	3.000
Personal Adjustment Ideology	I	57.688	6.750	Classroom Order	I	42.813	7.341
	II	56.524	6.750		II	40.667	7.625
	III	57.500	8.878		III	40.250	9.734
	IV	59.857	7.926		IV	44.571	4.504
Student Autonomy vs. Teacher Direction	I	70.375	8.286	Student Challenge	I	24.063	2.568
	II	69.143	5.332		II	24.524	2.892
	III	74.833	6.437		III	24.333	3.934
	IV	77.429	7.722		IV	27.143	1.345
Emotional Disengagement	I	11.250	2.646	Integrative Learning	I	51.688	7.472
	II	11.429	2.942		II	53.286	8.007
	III	10.417	2.193		III	53.333	5.383
	IV	11.000	1.155		IV	54.143	4.141

In an effort to determine the changes that occurred in the groups before and after participation in the RUPS program, T-tests of differences between means of independent samples were conducted. For each group, the scores of subjects who took the PRF as a pre-treatment measure were compared with the scores of subjects who took the PRF as a post-treatment measure. The scores of the subjects who took the DTB as a pre-treatment measure were compared with the scores of subjects who took the same instrument as a post-treatment measure.

Because no directional changes were hypothesized, a .05 level of significance on a non-directional or 2-tailed test was deemed necessary. In all cases where the F scores of the differences between variances was less than $p 0.10$, the probabilities resulting from the Welch T Prime Adjustment, as outlined in Ferguson (p.155 f.f.) were used.

The probabilities associated with the T-tests, carried out to indicate change among groups, for the scales of the PRF and the DTB are provided in Table XIII and Table XIV. The means and standard deviations of the groups were provided above in Table VI, VII, XI and XII.

TABLE XIII

SUMMARY OF DIRECTIONAL AND NON-DIRECTIONAL PROBABILITIES
ASSOCIATED WITH PRE-TREATMENT AND POST-TREATMENT CHANGES FOR FOUR
GROUPS ON THE PRF SCALES

PRF SCALES	GROUPS							
	1		2		3		4 (control)	
	P-1 Tail Direct- tional	P-2 Tail Non-Direct- tional	P-1 Tail Direct- tional	P-2 Tail Non-Direct- tional	P-1 Tail Direct- tional	P-2 Tail Non-Direct- tional	P-1 Tail Direct- tional	P-2 Tail Non-Direct- tional
Abasement	.342	.684	.306	.611	.292	.583	.467	.934
Achievement	.445	.891	.326	.651	.231	.461	.208	.416
Affiliation	.248	.495	.428	.856	.301	.602	.229	.457
Aggression	.302	.603	.074	.147	.112	.224	.090	.180
Autonomy	.111	.221	.445	.890	.115	.230	.304	.608
Change	.486	.972	.170	.340	.230	.459	.020	.039
Cognitive Structure	.372	.743	.285	.570	.371	.742	.384	.769
Defence	.295	.589	.289	.579	.196	.391	.171	.343
Dominance	.325	.649	.086	.172	.292	.584	.472	.945
Endurance	.248	.496	.487	.973	.007	.015	.377	.755
Exhibition	.178	.355	.309	.618	.463	.926	.169	.338
Harm- avoidance	.286	.572	.007	.014	.291	.582	.175	.350
Impulsivity	.199	.397	.386	.773	.373	.747	.496	.993

TABLE XIII (continued)

PRF SCALES	GROUPS							
	1		2		3		4 (control)	
	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional
Nurturance	.421	.843	.167	.335	.203	.406	.151	.301
Order	.366	.733	.486	.973	.500	1.00	.441	.883
Play	.464	.928	.380	.759	.149	.297	.110	.221
Sentience	.149	.297	.016	.032	.125	.250	.206	.412
Social Recognition	.478	.956	.112	.223	.204	.408	.273	.547
Succorance	.397	.794	.090	.181	.086	.172	.233	.467
Understanding	.196	.392	.126	.251	.392	.785	.343	.687
Infrequency	.070	.139	.437	.874	.402	.805	.259	.517
Desirability	.070	.139	.437	.874	.402	.805	.259	.517

All numbers rounded to the nearest 1/1000

TABLE XIV

SUMMARY OF DIRECTIONAL AND NON-DIRECTIONAL PROBABILITIES
ASSOCIATED WITH PRE-TREATMENT AND POST-TREATMENT CHANGES FOR FOUR
GROUPS ON THE DTB SCALES

DTB SCALES	GROUPS							
	1		2		3		4 (control)	
	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional	P-1 Tail Direct- ional	P-2 Tail Non-Direct- ional
Subject Matter Emphasis	.063	.126	.144	.287	.150	.300	.156	.313
Personal Adjustment Ideology	.235	.470	.052	.105	.368	.736	.365	.730
Student Autonomy vs. Teacher Direction	.184	.368	.430	.859	.356	.711	.096	.192
Emotional Disengagement	.144	.289	.401	.802	.365	.729	.276	.551
Consideration of Student Viewpoint	.311	.621	.468	.936	.403	.806	.437	.875
Classroom Order	.333	.666	.183	.366	.166	.332	.157	.314
Student Challenge	.391	.781	.049	.097	.390	.780	.002	.004
Integrative Learning	.073	.147	.330	.661	.287	.574	.046	.091

All numbers rounded off to the nearest 1/1000

Table XIII shows that no significant changes occurred in any of the behavioural characteristics, as measured by the PRF, among members of Group I. A trend toward an increase on the Desirability scales was noted, however, this was not significant. Group II increased significantly on the Harmavoidance scale and decreased significantly on the Sentience scale. A significant decrease in the Endurance scale was noted among the subjects in Group III. A non-significant decrease on the Infrequency scale was also observed among Group III. The results obtained for the control group showed a significant increase on the Change scale. On the basis of the above results, null hypothesis 1 was rejected. Table XIV indicates that no significant attitudinal changes, as measured by the DTB, occurred in any of the experimental groups as a result of participation in the RUPS workshop. A trend toward change on the Student Challenge scale is evident among members of Group II, however this was not significant on a non-directional test. The control group decreased significantly on the Student Challenge scale. On the basis of the above, null hypothesis 2 was supported.

To investigate the relationship between subjects' behavioural characteristics and their dimensions of teacher beliefs, as outlined above in null hypothesis 3, a correlational matrix was developed to compare the 22 variables of the PRF with the 8 variables of the DTB. The values of Pearson's r for this matrix are presented in Table XV while the probabilities associated with these values are contained in Table XVI.

TABLE XV
CORRELATION MATRIX BETWEEN SCALES OF THE
PRF AND DTB DEPICTING VALUES OF PEARSON'S r

PRF SCALES	DTB SCALES								IL
	SME	PAI	SATD	ED	CSV	CO	SC		
Abasement	.017	.137	-.055	-.028	.135	.093	.230	.088	
Achievement	.017	-.071	.061	.054	.032	-.032	.098	.092	
Affiliation	.118	.008	-.041	-.191	.179	.054	-.013	.100	
Aggression	-.068	-.092	.017	-.072	-.136	-.105	-.174	-.086	
Autonomy	-.138	-.029	.256	-.043	-.141	-.198	-.082	.042	
Change	-.111	.013	.299	-.192	-.007	-.062	-.068	.034	
Cognitive Structure	.505	.169	.239	.241	.189	.373	.114	.227	
Defendence	.375	.076	.314	.240	.144	.184	-.013	.017	
Dominance	.038	-.039	.146	-.109	.014	-.108	-.124	-.090	
Eundurance	.087	-.068	-.129	.113	-.136	.023	.029	-.047	
Exhibition	-.125	-.043	.306	-.125	.032	-.077	-.073	-.033	
Harm- avoidance	.224	.138	-.176	.151	.233	.161	.168	.165	
Impulsivity	-.191	-.064	.252	-.133	-.033	-.084	-.087	-.084	
Nurturance	.077	.182	.023	-.127	.244	.041	.215	.199	
Order	.343	.088	-.250	.266	.150	.202	.078	.194	
Play	-.106	-.020	.074	-.011	-.046	-.007	-.165	-.054	

TABLE XV (continued)

PRF SCALES	DTB SCALES									
	SME	PAI	SATD	ED	CSV	CO	SC	IL		
Sentience	-.060	-.127	.059	-.074	-.043	-.053	-.027	-.061		
Social Recognition	.142	-.028	-.118	-.026	.017	.057	.011	.001		
Succorance	.322	.057	-.282	.092	.167	.358	.109	.086		
Understanding	-.099	-.053	.168	.073	-.035	-.204	-.146	-.048		
Infrequency	.029	-.086	.106	-.104	-.064	-.021	-.056	-.153		
Desirability	.030	.100	.048	-.016	.114	-.043	.043	.176		

N = 106

TABLE XVI
PROBABILITIES OF t ASSOCIATED WITH CORRELATIONS
BETWEEN SCALES OF THE PRF AND THE DTB

PRF SCALES	DTB SCALES									
	SME	PAI	SATD	ED	CSV	CO	SC	IL		
Abasement	.861	.160	.574	.778	.166	.341	.018	.370		
Achievement	.859	.470	.536	.583	.745	.741	.316	.347		
Affiliation	.225	.931	.676	.049	.065	.584	.894	.305		
Aggression	.491	.350	.864	.468	.168	.285	.075	.384		
Autonomy	.157	.763	.008	.663	.146	.041	.401	.668		
Change	.254	.893	.002	.047	.946	.528	.484	.730		
Cognitive Structure	.000	.081	.013	.012	.051	.000	.242	.019		
Defendence	.000	.438	.001	.013	.139	.058	.895	.861		
Dominance	.697	.695	.135	.264	.884	.272	.205	.358		
Endurance	.372	.486	.187	.248	.163	.812	.770	.633		
Exhibition	.201	.658	.001	.201	.746	.428	.457	.736		
Harm- avoidance	.020	.157	.070	.121	.016	.098	.083	.089		
Impulsivity	.050	.512	.009	.175	.737	.389	.378	.393		
Nurturance	.433	.061	.811	.191	.011	.674	.026	.040		
Order	.000	.0367	.010	.006	.122	.037	.425	.045		
Play	.277	.840	.449	.910	.638	.945	.089	.583		

TABLE XVI (continued)

PRF SCALES	DTB SCALES							
	SME	PAI	SATD	ED	CSV	CO	SC	IL
Sentience	.539	.192	.546	.446	.658	.589	.782	.532
Social Recognition	.146	.775	.225	.788	.860	.558	.913	.990
Succorance	.001	.561	.003	.345	.086	.000	.264	.411
Understanding	.308	.586	.085	.452	.718	.035	.134	.622
Infrequency	.759	.577	.494	.501	.679	.890	.476	.320
Desirability	.759	.304	.622	.872	.243	.662	.659	.070

From the above data it appears that several low but significant correlations exist between behavioural characteristics, as measured by the PRF, and teacher attitudes, as measured by the DTB, among the subjects included in this study. These results are as follows:

1. The attitude towards Subject Matter Emphasis correlates positively with the behavioural characteristics of Cognitive Structure, Defence, Harmavoidance, Order and Succorance. This attitude is negatively correlated with the behavioural characteristics of Impulsivity.
2. An attitude or a belief toward Student Autonomy as opposed to Teacher Control is positively correlated with the behavioural characteristics of Autonomy, Change, Exhibition and Impulsivity. It correlates negatively with Cognitive Structure, Defence, Order and Succorance.
3. The attitude toward Emotional Disengagement is positively correlated with the behavioural characteristics of Cognitive Structure, Defence and Order while being negatively correlated with Affiliation and Change.
4. An attitude toward Consideration of Student Viewpoint is positively correlated with the behavioural characteristics of Harmavoidance and Nurturance.
5. An attitude toward Classroom Order is positively correlated with the behavioural characteristics of Cognitive Structure, Order and Succorance while being negatively correlated with Autonomy and Understanding.

6. An attitude toward Student Challenge is positively correlated with the behavioural characteristics of Abasement and Nurturance.

7. An attitude toward Integrative Learning is positively correlated with the behavioural characteristics of Cognitive Structure, Nurturance and Order.

On the basis of the above results, null hypothesis 3 was rejected.

Summary of Results

An analysis of variance procedure was used to determine whether the groups under study were similar with respect to attitudes and behavioural characteristics prior to a structured T-group experience. Results indicated that the groups were significantly different on three out of thirty scales.

Analysis using T-tests with adjusted means was used to determine whether a structured T-group experience had any effects on the behavioural characteristics of subjects. Results indicated that the T-group experience was responsible for a significant change in certain behavioural characteristics in two out of the three experimental groups.

A similar T-test analysis was employed to determine whether a structured T-group experience had any effects on the attitudes of the subjects. Results indicate that the T-group experience had no significant effects on the attitudes of the three experimental groups.

A correlated matrix was developed to see if there was any relationship between the attitudes and the behavioural characteristics

of the subjects involved in this study. Results indicated that several significant relationships existed.

CHAPTER V

DISCUSSION, CONCLUSIONS AND IMPLICATIONS

Discussion

The analysis of variance procedure employed to determine the degree of similarity or difference among groups prior to treatment yielded significant differences on only three of the thirty variables involved. This fact would suggest that either the groups were fairly homogeneous on the variables or that the instruments were not sensitive enough to detect existing differences. The fact that the students enrolled in the particular university course involved, and hence were not a random sample of education students, would seem to give support to the former alternative above.

The analysis of variance described above also indicated that the groups differed significantly on the Sentience scale of the PRF. Due presumably to the differences in the number of subjects in each group, the differences in variances associated with the variable were highly significant. As a result, it is questionable whether the results obtained are an accurate reflection of the differences among the groups. This problem could be somewhat alleviated if members of the groups were randomly discarded until all groups had equal N's before the analysis was repeated. The problem under discussion did not occur with differences among groups in the two other variables revealed by the analysis of variance.

The results yielded by the T-tests to measure pre and post-treatment changes within groups yielded little consistent information of the nature that could be used for making inferences and decisions.

None of the four groups changed significantly on the same scales. The closest approximation to change among groups on a common scale occurred between Group II and the control. Group II increased on the scale of Student Challenge, while the control group decreased on the same scale. As was mentioned above, the increase in Group II did not meet the requirements for a test of non-directional significance. Obviously, uncontrolled variables such as class membership, time spent in T-group sessions, content covered, group size and instructor emphasis were responsible for this lack of uniformity in the results.

Several relationships between behavioural characteristics and attitudes were observed from the results of the correlational analysis. It is important to note that the matter in question here was the relationship between the behavioural characteristics and attitudes of the subjects involved in the study and as operationally defined in this study. The question did not concern the correlation of the scales of the two instruments used, however, this may be an implication for further research. The matrix revealed several significant but small correlations between attitudinal and behavioural characteristics. Although the relationships appear to have some degree of face validity, the spread of the means and variances do not enhance the reliability of the data.

The relative lack of change, found by this study, in behavioural characteristics and attitudes as a result of the RUPS workshop would not be influential in decisions regarding future use of the RUPS program as optional curriculum material. The content of the RUPS workshop is much broader than the features included in this study.

Conclusions

The three major conclusions based on the results and the limits of this investigation are as follows:

1. A structured T-group has the potential to effect occasional significant changes in the members' behavioural characteristics. The changes do not appear to be widespread but rather isolated to specific areas.
2. A structured T-group appears to have no significant effect on its members' attitudes toward teaching.
3. There exist certain significant relationships between T-group members' behavioural characteristics and their attitudes toward teaching.

On the basis of this study several observations were made in addition to those mentioned above.

It was observed that a structured T-group led by an assistant professor of the university exhibited more changes in behavioural characteristics than did similar groups led by graduate teaching assistants. This would lend support to studies which have shown that the group leader is the major influence toward change in a group.

Because of the somewhat inconclusive evidence gained from this study, it was observed that "captive groups" may not represent the best samples from which to study the effects of T-groups on personality variables. The subjects in this study enrolled in the introductory counselling course voluntarily, but once enrolled had little choice other than to participate in the structured T-group.

Recommendations for Further Research

In view of the current popularity of T-groups, the need for further research on the effects of groups on personality variables is essential. The need for improved research designs and methodologies, as well as the development of more sensitive instruments, is deemed essential to help clear the ambiguities that exist in the area of group study. In the current search for suitable instruments, problems exist in the interpretation of results of studies being conducted. Investigators are using such a variety of instruments that the opportunity to compare results with another study which used the same measures appears improbable. Further complicating matters is the fact that many of the tests being used in current research are not widely available and very little, if any, informative literature exists on them.

In addition to the above, the following questions arising from the present investigation might enhance future studies.

1. Would more clear-cut results have been obtained had it been possible to match the groups more closely on variables such as number, age, sex and past T-group experience?
2. Would less ambiguous results have been obtained had the instructors been matched as to experience; ideology, and manner of presenting the structured T-group?
3. Would results have differed had instruments other than the PRF and the DTB been used to assess changes resulting from the RUPS workshop?

4. What would be the effects resulting from the RUPS program were it conducted after field experiences in student teaching?

5. Would the RUPS program be more effective if conducted within the context of an educational administration course as opposed to an introductory counselling course?

In the opinion of the writer, continued studies as to the effects of structured T-group experiences on personality variables would constitute valuable research since many of the extraneous variables associated with the format and content of the traditional "unstructured T-group" may be eliminated.

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APPENDIX A

APPENDIX A

DIMENSIONS OF TEACHER BELIEFS

Categories for Responding:

1. I would STRONGLY RESIST this statement.
 2. I would RESIST this statement.
 3. UNDECIDED.
 4. I would SUPPORT this statement.
 5. I would STRONGLY support this statement.
-
1. Teaching of specific skills and factual subject matter is the most important function of the school.
 2. The main reason for the curriculum guide is to provide the teacher with definite information regarding the material to be covered in the course.
 3. The attitudes learned by a student are often the most important result of a lesson or unit.
 4. A properly motivated group of mature students might learn more in a semester's time if they were left entirely to their own resources than if they had a teacher to guide them.
 5. Pupils must be kept busy or they soon get into trouble.
 6. His effectiveness is seriously impaired when the teacher permits himself to become emotionally involved in the personal problems of pupils.
 7. In the interest of good discipline pupils who repeatedly disrupt the class must be severely punished.
 8. Pupils learn self direction by having opportunities to set their own goals for learning.
 9. In planning their work teachers should rely heavily on the knowledge and skills pupils have acquired outside the classroom.
 10. The curriculum consists of subject matter to be learned and skills to be acquired.
 11. The essential function of junior high school courses lies in their preparing pupils for later courses.
 12. Small group work uses to best advantage the contrasting personalities, skills, and interests pupils have.
 13. Pupils frequently learn much more under their own initiative than they do under teacher direction.

14. Children need and should have more supervision and discipline than they usually get.
15. The effectiveness of teaching is enhanced when the teacher has the ability to see the world as each of his pupils sees it.
16. Proper control of a class is amply demonstrated when pupils work quietly while the teacher is out of the room.
17. Pupils respect teachers who stand firm on their convictions.
18. The pupil's knowledge is best developed when teachers interrelate facts and figures from many different subject fields.
19. The backbone of the school curriculum is subject matter; activities are useful mainly to facilitate the learning of subject matter.
20. Pupils learn library skills more readily by using their own devices in searching for materials of special interest than by a series of exercises designed to teach the logical steps in library procedure.
21. Teachers who like pupils will usually encourage pupil initiation and participation in planning lessons.
22. Across-the-school routine imposes a consistency in classroom procedure which tends to restrict important avenues for learning.
23. A well established classroom routine enhances the emotional stability of pupils.
24. Students who misbehave or do not learn are generally children who need more love.
25. Optimum learning takes place when the classroom setting is completely free of distractions.
26. The completion of any worthwhile task in education requires hard work on the part of pupils.
27. The deep interest which pupils sometimes develop in one subject can be valuable to them, but only if teachers succeed in broadening their perspectives across subject matter boundaries.
28. Pupil failure is averted when mastery of subject matter is the prime requisite for promotion.
29. The teacher assures optimum learning conditions by giving top priority to the social-emotional needs of pupils.
30. The effectiveness of the teacher depends entirely on the amount of personal interest he can invest in the progress of each pupil.
31. Pupils are motivated to do better work when they feel free to move around the room while the class is in session.

32. Pupils must see clearly that it is the teacher, not they, who has charge of classroom learning.
33. Children learn best in an atmosphere filled with love and emotional support.
34. Under ideal conditions pupils would view each teacher as a "specialist" in the subject taught.
35. Pupils gain more satisfaction from doing a difficult task well than any other achievement.
36. The most important thing a teacher can do to set the stage for learning is to discover the interests of the students.
37. The over-all plan of education suffers when teachers depart substantially from the subject outline.
38. The development of social and emotional security for pupils is the most important function of the school.
39. Pupils master the essentials of a subject only when extensive plans are made for accommodating individual differences in pupils.
40. Nothing captures students' interest in school work as quickly as allowing them to wrestle with problems of their own choosing.
41. Children learn the necessary skills of group participation only when they are exposed to sequences of activity requiring increasingly difficult skills from kindergarten through grade twelve.
42. The teacher's ability to see the world as each of his students see it is an absolute must if he is to have any success at all in teaching.
43. Pupils learn efficiently the essentials of a subject when every member of the class moves simultaneously through carefully planned lesson sequences.
44. Pupils never really understand a subject until they can relate what they have learned to the broader problems of the world.
45. The teacher must avoid strict adherence to the sequence provided by a textbook series.
46. Grading pupils separately on achievement and citizenship assures that teachers will insist on mastery of subject matter as well as good behaviour.
47. The individuality of pupils is sustained when teachers make allowances in their grade reports for the varying interests pupils have.
48. A teacher can frequently "reach" a rebellious pupil by taking an intense personal interest in his welfare.

49. When given a choice of activity, pupils generally select what is best for them.
50. The effective teacher has complete control of the learning situation at all times.
51. Good rapport with pupils is maintained by the teacher who always finds time to help individuals with special problems.
52. The natural flow of events is enhanced by the teacher who manages to eliminate any disruptive pupil behaviour.
53. Teachers must always be prepared to explain to pupils interrelationships among various elements of the overall curriculum.
54. An essential component of a good lesson is one of showing how it is related to other areas of knowledge.
55. Before pupils are encouraged to exercise independent thought they should be thoroughly grounded in the facts and knowledge about the subject.
56. Pupils gain a sense of belonging when the teacher encourages friendships among pupils in the room.
57. Nothing stimulates a pupil to apply himself more diligently than a warm, personal interest in his progress shown by the teacher.
58. Time to choose freely their own activity during the school day is a must for pupil morals.
59. The teacher who organizes the material and presents it to pupils in a forceful way gets the best results.
60. The use of sarcasm by the teacher can accomplish nothing but emotional harm for the pupil.
61. A good teacher will establish a routine and stick to it.
62. Teachers must set definite items aside to show pupils the relationships between their subject and the overall goal of education.
63. Learning is essentially a process of increasing one's store of information about various fields of knowledge.
64. Teachers increase their chances of directing the work into productive channels by having pupils participate in the planning.
65. Teachers who do not like pupils will usually decide on and plan lessons alone rather than use pupil participation.
66. Pupils learn best when permitted to set their own pace in doing the work.

67. Establishing the rules well in advance strengthens the teacher's hand in meeting the various problems that might arise.
68. Learning is enhanced when teachers praise generously the accomplishments of pupils.
69. The logical structure of subject matter is the most realistic guide to the organization of the work in the classroom.
70. Pupils gain better understanding of the subject if assignments are presented to them as a series of interrelated problems.
71. The structure of a field of knowledge is intrinsically interesting to pupils when it is clearly taught.
72. Group activity teaches children to think and plan together, independent of direct supervision by the teacher.
73. There is too great an emphasis on keeping order in the classroom.
74. A firm hand by the teacher promotes emotional security for pupils.
75. A teacher's effectiveness rests upon his ability to maintain proper "professional distance" between the pupils and himself.
76. The pupil's impression of the teacher's personality greatly influences what he learns.
77. Pupils respect teachers who expect them to work hard in school.
78. The basic function of education is fulfilled only when pupils are led to understand the general significance of the material they have learned.
79. In teaching it is essential to cover the material in the course of study.
80. The goals of education should be dictated by children's interests and needs as well as by the larger demands of society.
81. Children should be given more freedom in the classroom than they usually get.
82. Pupils do their best work when they know exactly what to expect from day to day.
83. Pupils are induced to greater motivation when the teacher remains somewhat aloof from the interpersonal affairs of the class.
84. Pupils learn to stay alert when they are expected to respond immediately to teacher demands.
85. Lessons presented in the form of problems to be solved are the best means of motivating pupils.
86. If curriculum plans are to be developed, they must go into detail on how course content can be integrated across subjects.